

*HOLOSTEUM UMBELLATUM* L., AN ANGIOSPERM  
NEW TO MICHIGAN<sup>1</sup>

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In May 1958 I collected what I felt was an "unusual chickweed" at the then recently acquired 200-acre tract for the new University of Michigan Botanical Gardens on Dixboro Road, 4 miles northeast of Ann Arbor. After identifying this plant as *Holosteum umbellatum*, the jagged chickweed, I suspected it to be an interesting find since there were no Michigan specimens in the University Herbarium.

Several months later my attention was called to a specimen of *Holosteum* being accessioned by the herbarium. This collection was made at Ann Arbor in 1949 by the late L. H. Jordal (no. 1498)<sup>2</sup>, and appears to have been the first Michigan record. Whether or not Jordal realized that his collection was a record has not been determined, but the evidence at hand suggests he did not. In April 1961 I searched for Jordal's locality and found a good stand of *Holosteum* on cultivated soil in the general vicinity.

I have checked for records of this species in published local floras and at other herbaria in the state (see below). An additional collection was found in the herbarium of Eastern Michigan University, Ypsilanti, the specimens having been taken from the lawn near Pierce Hall on the campus of that institution by Richard A. Giles, 5 April 1955. I visited this site in May 1961 and found the plant both in lawn turf and in the adjacent open soil. Also, upon revisiting my original locality in 1960, 1961, and 1962, I found this species each year, and although actual numbers were not recorded, there appeared to be some increase in the number of plants. Specimens of each of my collections will be deposited in the University of Michigan Herbarium (*Piehl 5846, 6029, 6101, 6102*).

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<sup>1</sup>The observations reported herein were made while the writer was engaged in doctoral studies in the Department of Botany, University of Michigan, Ann Arbor.

<sup>2</sup>It is of interest that this collection is from the old botanical gardens, a 40-acre tract on Iroquois Drive in Ann Arbor. However, it is very unlikely that the *Holosteum* was transported from that site to the new locality, since the transfer of the gardens' plants had not begun at the time of my collection.



*Holosteum*, a native of Europe, is well distinguished from our other chickweeds by its pale, generally glaucous foliage, its non-cleft but often jagged or emarginate petals, and by its umbellate inflorescence. Because some of the flowers open before the pedicels have elongated fully, the umbellate nature of the inflorescence may be obscure when flowering begins. The inflorescence become distinctly umbellate later, however, and as has been recorded (Fernald, 1950), some of the pedicels actually become reflexed in fruit, although they are described by Britton and Brown (1897) as erect and are illustrated as such in the most recent edition of *The Illustrated Flora* (Gleason, 1952). None of the above manuals mentions the fact that the very delicate, somewhat hyaline, white or rarely pinkish petals are persistent, although they become hidden by the more rigid, scarious-margined sepals. A poorly-defined basal rosette is formed by large specimens, but it is lacking from the smaller plants. Although the stems tend to be somewhat decumbent, they are not trailing like those of some species of *Cerastium* and *Stellaria*.

I suspect that *Holosteum* is often overlooked due to its rather unusual phenology. It begins to flower in early April at Ann Arbor, and perhaps earlier depending on the season, but unlike the common chickweed, *Stellaria media*, it flowers and fruits for a relatively short time and is, itself, ephemeral. In early May I have observed both dehisced and developing capsules as well as flowers. By mid-May, however, the foliage yellows, and the entire plant soon dries and easily escapes detection. Thus, specimens of *Holosteum* are likely to be found over a period of only a few weeks, the plant apparently passing most of the collecting season in the form of seeds.

The precociousness of *Holosteum* caused me to doubt that the plant was, strictly speaking, an annual, as some of the manuals indicate (*e.g.* Gleason, 1952). During the winter 1961-62 I visited the Dixboro Road locality at a time when most of the snow had melted and found numerous seedlings which apparently had developed the previous autumn. *Holosteum* thus behaves as a winter annual. Whether some seeds also germinate the following spring is not known. The leaves



(not meaning the cotyledons) of the seedlings are spatulate or oblanceolate to oblong, the lamina narrowing in some cases nearly to the extent of making the leaves petioled, and some have a tiny black fleck at the very apex. They tend to have a thicker epidermal covering and to be more succulent than the leaves formed the ensuing growing season. The shape of the cauline leaves, in contrast, is from oblong to ovate, and they are sessile. The over-wintering leaves of the seedlings, which soon yellow and dry as growth is resumed the following spring, are not found on the majority of herbarium specimens, and are omitted from most descriptions. Elongation of the stem and the appearance of the inflorescence occurs rather rapidly and will take place at relatively low temperatures.<sup>3</sup>

The occurrence of *Holosteum* in southern Michigan indicates that its range is still being expanded, and that it should be looked for by early-ranging botanists elsewhere in the Midwest. Previous to the Michigan collections reported herein, the jagged chickweed was recorded as far west as Ohio and Kentucky by Fernald (1950), while earlier it was known at first only from the vicinity of Lancaster, Pennsylvania (Gray, 1856), and later from New Jersey and Pennsylvania to Georgia (Robinson and Fernald, 1908).

I wish to acknowledge the cooperation received from curators of the following herbaria: Cranbrook Institute of Science, Eastern Michigan University, Michigan State University, The University of Michigan, and Wayne State University. — SANTA BARBARA BOTANIC GARDEN, SANTA BARBARA, CALIFORNIA.

#### LITERATURE CITED

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<sup>3</sup>Specimens kept at a constant 40°F in March before spring growth had begun underwent elongation of the stems and enlargement of the flower buds.